Aeronautics Educator Guide			
1998 Science			
Content Standards			
California Science			
Grade 2			
Activity/Lesson	**State**	**Standards**	
Air Engines (12-16)	CA	SCI.2.PS.1.a	The motion of objects can be observed and measured. As a basis for understanding this concept Students know the position of an object can be described by locating it in relation to another object or to the background
Air Engines (12-16)	CA	SCI.2.PS.1.b	The motion of objects can be observed and measured. As a basis for understanding this concept Students know an object's motion can be described by recording the change in position of the object over time
Air Engines (12-16)	CA	SCI.2.PS.1.c	The motion of objects can be observed and measured. As a basis for understanding this concept Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force, of the push or pull
Air Engines (12-16)	CA	SCI.2.IE.4.f	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects
Rotor Motor (69-75)	CA	SCI.2.PS.1.b	The motion of objects can be observed and measured. As a basis for understanding this concept Students know an object's motion can be described by recording the change in position of the object over time
Rotor Motor (69-75)	CA	SCI.2.IE.4.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Construct bar graphs to record data, using appropriately labeled axes
Where is North? The Compass Can Tell Us (87-90)	CA	SCI.2.PS.1.f	The motion of objects can be observed and measured. As a basis for understanding this concept Students know magnets can be used to make some objects move without being touched

Dunked Napkin (17-22)	CA	SCI.2.IE.4.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Make predictions based on observed patterns and not random guessing
Dunked Napkin (17-22)	CA	SCI.2.IE.4.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Construct bar graphs to record data, using appropriately labeled axes
Dunked Napkin (17-22)	CA	SCI.2.IE.4.g	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Follow oral instructions for a scientific investigation
Paper Bag Mask (23-28)	CA	SCI.2.IE.4.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Make predictions based on observed patterns and not random guessing
Paper Bag Mask (23-28)	CA	SCI.2.IE.4.b	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units
Wind in Your Socks) (29-35)	CA	SCI.2.IE.4.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Make predictions based on observed patterns and not random guessing

Wind in Your Socks) (29-35)	CA	SCI.2.IE.4.b	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units
Wind in Your Socks) (29-35)	CA	SCI.2.IE.4.d	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Write or draw descriptions of a sequence of steps, events, and observations
Wind in Your Socks) (29-35)	CA	SCI.2.IE.4.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Construct bar graphs to record data, using appropriately labeled axes
Right Flight (52-59)	CA	SCI.2.IE.4.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Make predictions based on observed patterns and not random guessing
Delta Wing Glider (60-68)	CA	SCI.2.IE.4.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Make predictions based on observed patterns and not random guessing
Aeronautics Educator Guide			
1998 Science			
Content Standards			
California Science			
Grade 3			
Activity/Lesson	**State**	**Standards**	

Air Engines (12-16)	CA	SCI.3.IE.5.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Repeat observations to improve accuracy and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation
Air Engines (12-16)	CA	SCI.3.IE.5.b	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate evidence from opinion and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed
Air Engines (12-16)	CA	SCI.3.IE.5.c	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Use numerical data in describing and comparing objects, events, and measurements
Flight: Interdisciplinary Learning Activities (76-79)	CA	SCI.3.IE.5.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Collect data in an investigation and analyze those data to develop a logical conclusion
We Can Fly, You and I: Interdisciplinary Learning (107-108)	CA	SCI.3.IE.5.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Collect data in an investigation and analyze those data to develop a logical conclusion

Dunked Napkin (17-22)	CA	SCI.3.IE.5.b	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate evidence from opinion and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed
Dunked Napkin (17-22)	CA	SCI.3.IE.5.d	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Predict the outcome of a simple investigation and compare the result with the prediction
Dunked Napkin (17-22)	CA	SCI.3.IE.5.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Collect data in an investigation and analyze those data to develop a logical conclusion
Paper Bag Mask (23-28)	CA	SCI.3.IE.5.c	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Use numerical data in describing and comparing objects, events, and measurements
Paper Bag Mask (23-28)	CA	SCI.3.IE.5.d	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Predict the outcome of a simple investigation and compare the result with the prediction

Wind in Your Socks) (29-35)	CA	SCI.3.IE.5.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Repeat observations to improve accuracy and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation
Wind in Your Socks) (29-35)	CA	SCI.3.IE.5.b	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate evidence from opinion and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed
Wind in Your Socks) (29-35)	CA	SCI.3.IE.5.c	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Use numerical data in describing and comparing objects, events, and measurements
Wind in Your Socks) (29-35)	CA	SCI.3.IE.5.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Collect data in an investigation and analyze those data to develop a logical conclusion
Right Flight (52-59)	CA	SCI.3.IE.5.d	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Predict the outcome of a simple investigation and compare the result with the prediction

Delta Wing Glider (60-68)	CA	SCI.3.IE.5.d	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Predict the outcome of a simple investigation and compare the result with the prediction
Aeronautics Educator Guide			
1998 Science			
Content Standards			
California Science			
Grade 4			
Activity/Lesson	**State**	**Standards**	
Air Engines (12-16)	CA	SCI.4.IE.6.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations
Air Engines (12-16)	CA	SCI.4.IE.6.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Construct and interpret graphs from measurements
Where is North? The Compass Can Tell Us (87-90)	CA	SCI.4.PS.1.f	Electricity and magnetism are related effects that have many useful applications in everyday life. As a basis for understanding this concept Students know that magnets have two poles (north and south) and that like poles repel each other while unlike poles attract each other
Where is North? The Compass Can Tell Us (87-90)	CA	SCI.4.IE.6.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations

Dunked Napkin (17-22)	CA	SCI.4.IE.6.c	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Formulate and justify predictions based on cause-and-effect relationships
Dunked Napkin (17-22)	CA	SCI.4.IE.6.d	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Conduct multiple trials to test a prediction and draw conclusions about the relationships between predictions and results
Dunked Napkin (17-22)	CA	SCI.4.IE.6.f	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Follow a set of written instructions for a scientific investigation
Paper Bag Mask (23-28)	CA	SCI.4.IE.6.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations
Paper Bag Mask (23-28)	CA	SCI.4.IE.6.c	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Formulate and justify predictions based on cause-and-effect relationships
Paper Bag Mask (23-28)	CA	SCI.4.IE.6.d	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Conduct multiple trials to test a prediction and draw conclusions about the relationships between predictions and results

Paper Bag Mask (23-28)	CA	SCI.4.IE.6.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Construct and interpret graphs from measurements
Wind in Your Socks) (29-35)	CA	SCI.4.IE.6.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations
Wind in Your Socks) (29-35)	CA	SCI.4.IE.6.b	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Measure and estimate the weight, length, or volume of objects
Wind in Your Socks) (29-35)	CA	SCI.4.IE.6.e	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Construct and interpret graphs from measurements
Right Flight (52-59)	CA	SCI.4.IE.6.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations

Right Flight (52-59)	CA	SCI.4.IE.6.c	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Formulate and justify predictions based on cause-and-effect relationships
Delta Wing Glider (60-68)	CA	SCI.4.IE.6.a	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations
Delta Wing Glider (60-68)	CA	SCI.4.IE.6.c	Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will Formulate and justify predictions based on cause-and-effect relationships